UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,979	04/16/2001	Michael McClary	04906.P076	7544

8791 7590 11/09/2004

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER	
NGUYEN, BRIAN D	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,979	MCCLARY ET AL.	
	Examiner	Art Unit	
	Brian D Nguyen	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *the amendment filed 7/1/04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *32-34 and 48-50* is/are allowed.

6)☒ Claim(s) *1-31 and 35-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-31 and 35-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engdahl et al (5,500,853) in view of Shachar et al (5,668,807).

Regarding claims 1, 6, Engdahl discloses a machine-readable medium that provides instruction when executed by a set of processors (see 170 of figure 5; col. 14, lines 43-54) to perform operations comprising: a state machine (see figures 10B-10D and 276 of figure 34); receiving a first and second signal (DS1, DS2, DS3); simultaneously sync hunting the first signal with the first subset of the set of per-alignment state machines and the second signal with the second subset of the set of per-alignment state machine (see abstract; col. 5, lines 12-40; col. 24, lines 50-61). Engdahl discloses a shared memory (see col. 8, lines 54-63. Note that this memory can be used to store any kind of information and any information can be stored in any kind of memories such as internal/external and shared and separate momories. Other memories are also used in Engdahl's system) Engdahl does not specifically disclose initializing the state machine. However, Shachar discloses initializing the state machine (see figure 10 and col. 13, lines 4-6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to initialize the state machine as taught by Shachar in the system of Engdahl because the state machine need to initialize in order for the machine to perform its functions.

Regarding claims 2, 7, Engdahl discloses the first signal (DS3) and the second signal (DS2 or DS1) have different formats.

Regarding claims 3-5, 8-9, Engdahl discloses updating, buffering, and writing the states to the state machine (Engdahl uses of state counter for keeping track of the state of the state machine which is equivalent to updating the state of the state machine; see state counters 472, 478, 520 of figures 10B-10D; col. 52, lines 25-36). Shachar also discloses updating, buffering, and writing the state to the state machine (see col. 8, lines 45-64; col. 13, line 64).

Regarding claims 10-13, claims 10-13 are machine-readable medium claims that have substantially all the limitations of claims 1-5. Therefore, they are subject to the same rejection.

Regarding claims 14-31, claims 14-31 are apparatus claims that have substantially all the limitations of machine-readable medium claims 1-13. Therefore, they are subject to the same rejection.

Regarding claims 35-47, claims 35-47 are method claims that have substantially all the limitations of machine-readable medium claims 1-13. Therefore, they are subject to the same rejection.

Allowable Subject Matter

3. Claims 32-34 and 48-50 are allowed.

Response to Arguments

4. Applicant's arguments, see remarks, filed 7/1/04, with respect to claims 32-34 and 48-50 have been fully considered and are persuasive. The rejection of claims 32-34 and 48-50 has been withdrawn.

5. Applicant's arguments filed 7/1/04 regarding claims 1-31 and 35-47 have been fully considered but they are not persuasive.

The applicant argued that *each demultiplexer in Engdahl has separate memory in the form of a state counter that "provides a pointer that indicates which bit of the DS3 M-frame the incoming DS3 data bit is associated with." (col. 23, lines 18-20) As such, Engdahl is the same as the prior art disclosed by the Applicant in Figure 1 in that a plurality of deframers each having separate memory internal to the deframers are required to demultiplex a higher DS-level data stream*. This argument is not persuasive because the use of a shared or a separate memory is a matter of choice. In addition, claim 14, for example, only claims a memory for storing a set of per-alignment state machine. The applicant also argued that *Engdahl does not use per alignment state machine, but rather merely discloses that "the shift register is searched" and a counter "is advantaged or retarded the correct number of subframes to obtain frame alignment" (col. 24, lines 56-61).* The examiner disagrees because Engdahl does disclose an alignment state machine as described in the 103 rejection section in this Office Action. The applicant also argued that *Shachar describes a state machine for framing packets, and has nothing to do with sync hunting for defaming purposes*. This argument is not persuasive because Shachar reference is used to show that a state machine needs to be initialized (see col. 13, lines 4-7). In addition, Shachar explicitly disclose a method for sync hunting (see col. 1, line 7-22) and the deframing process is just an inverse of framing process. The applicant also argued on page 18 that *the references do*

not individually or in combination describes or suggest "a first sync hunt logic to sync hunt a first signal; a second sync hunt logic to sync hunt second signal; a memory controller coupled with the first and the second sync hunt logics, thee memory controller to perform read write operations between the first and second sync hunt logics...to store a set of per-alignment state machines. This argument is not persuasive because Engdahl explicitly discloses these limitations as described in paragraph 2 above. Note that the first and second signals are DS1, DS2 or DS3 signals and the first and second sync hunt logics are devices that perform synchronization hunting for these signals. Note also that when data are stored in a memory, a memory controller must be used to control the writing and reading to and from the memory.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/02/04

BRIAN NGUYEN
PRIMARY EXAMINER